
Plant-based **Molecular Farming** Innovation

The Recombinant Edge :
Revealing Genuine Protein Potential



BioApplications Inc.



*BioApp's ultimate goal is of realizing One-Health by providing
safe, eco-friendly, animal-free, and low-cost
Plant-based Premium Vaccines and Recombinant Proteins*



Plant No.1 (Pohang Technopark) GMP Facility



Pilot Facility
in Plant No.1



Plant No.2
(For plant cultivation, RIST)



Our Places

- kvGMP certified manufacturing plant (Pohang, South Korea)
- R&D center (Pohang, South Korea)
- Finance & Marketing center (Seoul, South Korea)

The countries where BioApp has partnership with various enterprises, universities, research institutions, etc.



BioApp's Sustainable Green Technology for Recombinant Proteins

BioApp is a biotech company based on a plant platform. GLEAP™ is the brand for BioApp's green biomaterial business, which includes recombinant proteins containing growth factors and extracellular matrix for cell culture media.

Our growth factor product line includes FGF2, IGF1, EGF, Insulin, and we are developing and producing recombinant proteins such as Laminin, Vitronectin, Transferrin, Albumin.

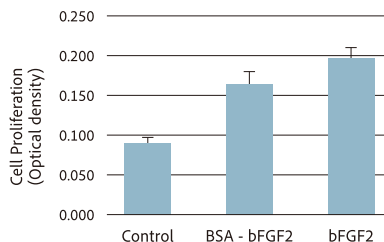
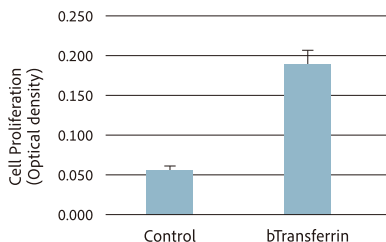
Growth Factors

One of BioApp's flagship growth factor products is GLEAP™ FGF2, which has been shown to significantly increase the growth of muscle stem cells derived from chickens and cows. Additionally, our GLEAP™ Transferrin has demonstrated approximately a threefold increase in the growth of chicken-derived muscle stem cells.

Biological Activity of Plant-made Bovine GFs

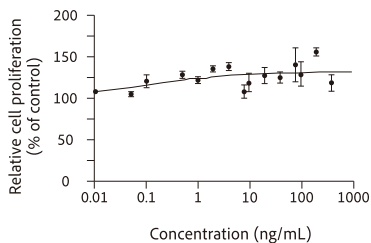
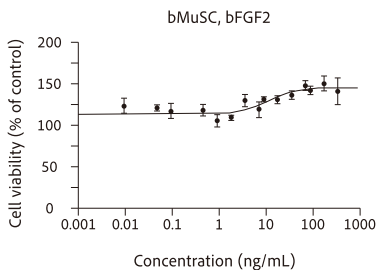
■ Chicken Muscle Stem Cells

[Data from Seawith]



■ Bovine Muscle Stem Cells

[Data from MKbiotech]

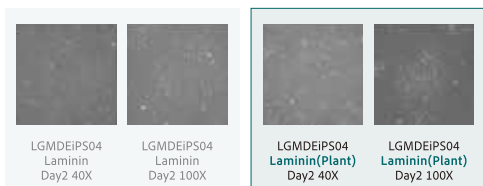


Laminin511E8

For GLEAP Laminin (511 E8), it has effectively induced the adhesion of iPS cells, and the adhesion and proliferation of MS cells have proven superior compared to existing products from another company.

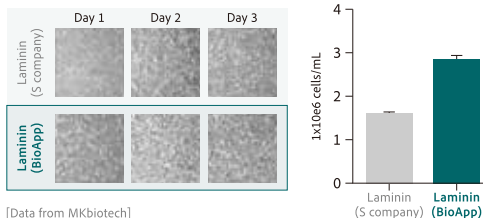
Plant-made Human Recombinant Laminin

■ iPS Cell Adhesion



[Data from K-FDA]

■ MS Cell Adhesion & Proliferation



Growth Factors and Recombinant Proteins for Cultured Meat

Growth Factors			
Bovine FGF2 Porcine FGF2 Bovine EGF	Human FGF2	Bovine IGF1 Bovine Insulin	Avian FGF2 Porcine/Avian EGF Porcine/Avian IGF1 Porcine/Avian Ins
Pilot Scale 0.1 ~ 10g	Lab Scale 1 ~ 100mg	R&D Protocol optimization	In development Screening
Bovine Transferrin Porcine Transferrin Bovine Serum Albumin	Human Laminin	Bovine Vitronectin Bovine Laminin	Porcine Albumin Avian Albumin Avian Transferrin
Recombinant Proteins			

* Growth Factors

- Purified : FGF2 (bovine, porcine, avian, human), Laminin (bovine, human)
- Partially purified : The rest

* Recombinant Proteins

- Purified : Laminin (bovine, human)
- Partially purified : The rest

BioApp's Business Arms

Our business encompasses two main sectors:
the HERBAVAC™, green vaccine business and the GLEAP™, green biomaterial business

Raw Materials | GLEAP™

- Growth Factors for Cultured Meat & Cosmetics
- Recombinant Proteins for Diagnostics
Dengue fever, Yellow fever, Zika, COVID-19, Influenza,
African Swine Fever, Classical Swine Fever, Leptospira,
Tuberculosis, BVDV, Irisin



HERBAVAC

Green Vaccine | HERBAVAC™

Launched on the market

- HERBAVAC CSF Green Marker
- HERBAVAC Circo Green Vaccine

Under the field clinical trials

- PPV (Porcine Parvo Virus) green vaccine: VLP based
- PED (Porcine Endemic Diarrhea) Virus green vaccine: Spike protein based

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